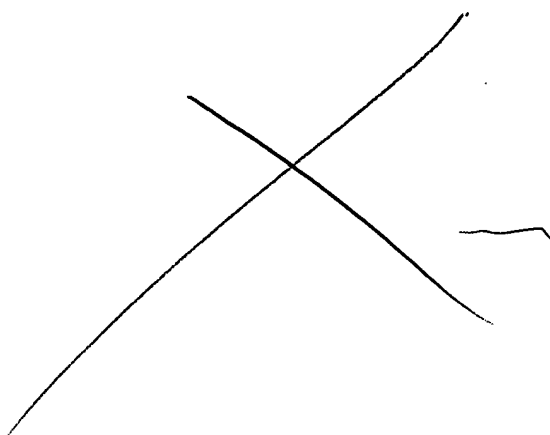


Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L7	11	CYCLOALKYLPHOSPHINE	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/05/30 12:18
L8	64081	POLYISOCYANATE	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/05/30 12:18
L9	0	L7 AND L8	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/05/30 12:19
L10	0	L8 AND (ALKYCYCLOALKYPHOSPHINE OR DIALKLYCYCLOALKYLPHOSPHINE OR TRICYCLOALKYLPHOSPHINE)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2005/05/30 12:21



Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSSPTA1621

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

\* \* \* \* \* Welcome to STN International \* \* \* \* \*

NEWS	1		Web Page URLs for STN Seminar Schedule - N. America
NEWS	2		"Ask CAS" for self-help around the clock
NEWS	3	FEB 25	CA/CAPLUS - Russian Agency for Patents and Trademarks (ROSPATENT) added to list of core patent offices covered
NEWS	4	FEB 28	PATDPAFULL - New display fields provide for legal status data from INPADOC
NEWS	5	FEB 28	BABS - Current-awareness alerts (SDIs) available
NEWS	6	FEB 28	MEDLINE/LMEDLINE reloaded
NEWS	7	MAR 02	GBFULL: New full-text patent database on STN
NEWS	8	MAR 03	REGISTRY/ZREGISTRY - Sequence annotations enhanced
NEWS	9	MAR 03	MEDLINE file segment of TOXCENTER reloaded
NEWS	10	MAR 22	KOREAPAT now updated monthly; patent information enhanced
NEWS	11	MAR 22	Original IDE display format returns to REGISTRY/ZREGISTRY
NEWS	12	MAR 22	PATDPASPC - New patent database available
NEWS	13	MAR 22	REGISTRY/ZREGISTRY enhanced with experimental property tags
NEWS	14	APR 04	EPFULL enhanced with additional patent information and new fields
NEWS	15	APR 04	EMBASE - Database reloaded and enhanced
NEWS	16	APR 18	New CAS Information Use Policies available online
NEWS	17	APR 25	Patent searching, including current-awareness alerts (SDIs), based on application date in CA/CAPLUS and USPATFULL/USPAT2 may be affected by a change in filing date for U.S. applications.
NEWS	18	APR 28	Improved searching of U.S. Patent Classifications for U.S. patent records in CA/CAPLUS
NEWS	19	MAY 23	GBFULL enhanced with patent drawing images
NEWS	20	MAY 23	REGISTRY has been enhanced with source information from CHEMCATS
NEWS	21	MAY 26	STN User Update to be held June 6 and June 7 at the SLA 2005 Annual Conference
NEWS EXPRESS			JANUARY 10 CURRENT WINDOWS VERSION IS V7.01a, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 10 JANUARY 2005
NEWS HOURS			STN Operating Hours Plus Help Desk Availability
NEWS INTER			General Internet Information
NEWS LOGIN			Welcome Banner and News Items
NEWS PHONE			Direct Dial and Telecommunication Network Access to STN
NEWS WWW			CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation

of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

\*\*\*\*\* STN Columbus \*\*\*\*\*

FILE 'HOME' ENTERED AT 12:23:38 ON 30 MAY 2005

=> FILE REG

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'REGISTRY' ENTERED AT 12:23:49 ON 30 MAY 2005

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2005 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 29 MAY 2005 HIGHEST RN 851364-46-0

DICTIONARY FILE UPDATES: 29 MAY 2005 HIGHEST RN 851364-46-0

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

\*\*\*\*\*  
\*  
\* The CA roles and document type information have been removed from \*  
\* the IDE default display format and the ED field has been added, \*  
\* effective March 20, 2005. A new display format, IDERL, is now \*  
\* available and contains the CA role and document type information. \*  
\*  
\*\*\*\*\*

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:

<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> S CYCLOALKYLPHOSPHINE

L1 0 CYCLOALKYLPHOSPHINE

=> S ( CYCLOALKYLPHOSPHINE OR ALKYL CYCLOALKYLPHOSPHINE OR TRICYCLOALKYLPHOSPHINE)

0 CYCLOALKYLPHOSPHINE

0 ALKYL CYCLOALKYLPHOSPHINE

0 TRICYCLOALKYLPHOSPHINE

L2 0 ( CYCLOALKYLPHOSPHINE OR ALKYL CYCLOALKYLPHOSPHINE OR TRICYCLOALKYLPHOSPHINE)

=> FILE CAPLUS

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	21.41	21.62

FILE 'CAPLUS' ENTERED AT 12:27:44 ON 30 MAY 2005

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 30 May 2005 VOL 142 ISS 23  
FILE LAST UPDATED: 29 May 2005 (20050529/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> S CYCLOALKYLPHOSPHINE  
L3 6 CYCLOALKYLPHOSPHINE

=> S POLYISOCYANATE  
L4 18201 POLYISOCYANATE

=> S L3 AND L4  
L5 0 L3 AND L4

=> D L3 1-6 ABS IBIB

L3 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN  
AB Aliphatic polyisocyanates comprising uretdione groups and having low content of byproducts (uretonimines), useful as low-viscosity internally blocked crosslinking agents for coatings, were manufactured by dimerization of aliphatic isocyanates in the presence of phosphines bearing  $\geq 1$  cycloalkyl group on the P atom. For example, in dimerization of hexamethylene diisocyanate at 40-100°, the uretdione selectivity of butyldicyclopentylphosphine catalyst at a given yield was higher than with Bu3P as catalyst.

ACCESSION NUMBER: 2004:427624 CAPLUS  
DOCUMENT NUMBER: 140:424084  
TITLE: Manufacture of polyisocyanates containing uretdione groups using cycloalkylphosphines as dimerization catalysts  
INVENTOR(S): Richter, Frank; Halpaap, Reinhard; Laas, Hans-Josef; Hecking, Andreas  
PATENT ASSIGNEE(S): Bayer Materialscience Ag, Germany  
SOURCE: Eur. Pat. Appl., 13 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1422223	A1	20040526	EP 2003-26029	20031112
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				

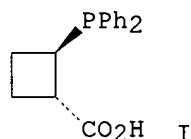
DE 10254878 A1 20040603 DE 2002-10254878 20021125  
 US 2004106789 A1 20040603 US 2003-719175 20031121  
 BR 2003005203 A 20040831 BR 2003-5203 20031121  
 JP 2004175803 A2 20040624 JP 2003-393543 20031125  
 PRIORITY APPLN. INFO.: DE 2002-10254878 A 20021125  
 OTHER SOURCE(S): MARPAT 140:424084  
 REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN  
 AB Cycloalkylphosphines were prepared by hydrogenation of arylphosphines in the presence of Nb or Ta aryloxides. Thus, a mixture of Nb(OC6H3Ph2-2,6)2(CH2C6H4Me-4)3, bis(diphenylphosphino)methane, and cyclohexane was kept under 1200 psi H at 100° for 4 days to give 96% bis(dicyclohexylphosphino)methane. A process for hydrogenation of arene-containing polymers using niobium or tantalum hydride hydrocarbyloxides is also claimed.

ACCESSION NUMBER: 1994:298978 CAPLUS  
 DOCUMENT NUMBER: 120:298978  
 TITLE: Process for the hydrogenation of aryl phosphines  
 INVENTOR(S): Rothwell, Ian Paul; Yu, S. Joyce  
 PATENT ASSIGNEE(S): Research Corp. Technologies, Inc., USA  
 SOURCE: PCT Int. Appl., 33 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9321192	A1	19931028	WO 1993-US3453	19930413
W: CA, JP, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5530162	A	19960625	US 1993-90085	19930721
PRIORITY APPLN. INFO.:			US 1992-867948	A2 19920413
			WO 1993-US3453	W 19930413
OTHER SOURCE(S):			CASREACT 120:298978; MARPAT 120:298978	

L3 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN  
 GI



AB A novel type of chiral cycloalkylphosphines bearing a carboxy group at the β-position, e.g., I, were developed, and used for palladium catalyzed asym. allylic alkylation of allylic substrates such as 2-cyclohexenyl acetate and 1,3-disubstituted propenyl acetates. Reaction of the propenyl acetates with soft carbon nucleophiles such as tri-Et sodiophosphonoacetate and sodiummalonic acid esters in the presence of a palladium catalyst prepared in situ from Pd(OAc)<sub>2</sub> and chiral (2-diphenylphosphino)cycloalkanecarboxylic acids gave high yields of alkylation products [PhCH:CHCH(X)Ph: > 77 % ee for X = CH(CO<sub>2</sub>Et)P(O)(OEt)<sub>2</sub> > 72 % ee for X = CH(CO<sub>2</sub>Me)<sub>2</sub>]. The alkylation products were converted into optically active α-methylene γ-lactone and α-methylene macrolide derivs.

ACCESSION NUMBER: 1991:632357 CAPLUS  
 DOCUMENT NUMBER: 115:232357  
 TITLE: Synthesis of a novel type of chiral  
 phosphinocarboxylic acids. Phosphine-palladium  
 complex catalyzed asymmetric allylic alkylation  
 AUTHOR(S): Okada, Yoshiharu; Minami, Toru; Umezu, Yasuo;  
 Nishikawa, Shinji; Mori, Ryoji; Nakayama, Yutaka  
 CORPORATE SOURCE: Dep. Appl. Chem., Kyushu Inst. Technol., Kitakyushu,  
 804, Japan  
 SOURCE: Tetrahedron: Asymmetry (1991), 2(7), 667-82  
 CODEN: TASYE3; ISSN: 0957-4166  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 115:232357

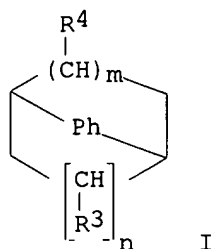
L3 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN  
 AB The title compds. were prepared by hydrogenation of the corresponding  
 arylphosphine oxides using a noble metal catalyst in a solvent at  
 10-100° and 0.1-15 MPa H. Thus, Ph<sub>3</sub>PO in EtOH/HOAc was  
 hydrogenated over Rh<sub>2</sub>O<sub>3</sub>/PtO<sub>2</sub> at 30° and 1.0 MPa for 5 h to give  
 75.5% tricyclohexylphosphine oxide.

ACCESSION NUMBER: 1991:229153 CAPLUS  
 DOCUMENT NUMBER: 114:229153  
 TITLE: Preparation of **cycloalkylphosphine** oxides by  
 hydrogenation of arylphosphine oxides  
 INVENTOR(S): Krause, Hanswalter; Doebler, Christian  
 PATENT ASSIGNEE(S): Akademie der Wissenschaften der DDR, Ger. Dem. Rep.  
 SOURCE: Ger. (East), 8 pp.  
 CODEN: GEXXA8  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	---	-----	-----	-----
DD 283633	A5	19901017	DD 1988-320978	19881021
PRIORITY APPLN. INFO.:			DD 1988-320978	19881021
OTHER SOURCE(S):	CASREACT 114:229153; MARPAT 114:229153			

L3 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN  
 AB Unavailable  
 ACCESSION NUMBER: 1988:6174 CAPLUS  
 DOCUMENT NUMBER: 108:6174  
 TITLE: The reactions of bulky cyclopropyl and cyclobutyl  
 phosphines with platinum, palladium, and iridium  
 AUTHOR(S): Simms, Barbara Lynn  
 CORPORATE SOURCE: Northwestern Univ., Evanston, IL, USA  
 SOURCE: (1987) 153 pp. Avail.: Univ. Microfilms Int., Order  
 No. DA8710387  
 From: Diss. Abstr. Int. B 1987, 48(1), 132  
 DOCUMENT TYPE: Dissertation  
 LANGUAGE: English

L3 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN  
 GI



AB R1R2PH (R1, R2 = C2-18 alkyl, cycloalkyl, aralkyl; R2 = H) and I (m, n = 1-3, m + n ≤ 5, R3, R4 = C1-6 alkyl C2-18 cycloalkyl, aralkyl) were prepared by addition of PH3 to alkenes or cycloalkenes by continuous introduction of PH3 at 0-35°, 80-300 bar and reaction at 90-190° in the presence of a radical catalyst. Thus, PH3 at 25°, 150 bar was added to a 50:50:1 mixture of cyclohexene-toluene-azobisisobutyronitrile at 120° to give cyclohexylphosphine.

Similarly prepared were 1-octylphosphine and 9H-9-phosphabicyclononanes.

ACCESSION NUMBER: 1978:580154 CAPLUS  
DOCUMENT NUMBER: 89:180154  
TITLE: Continuous manufacture of organic phosphines  
INVENTOR(S): Elsner, Georg; Heymer, Gero; Stephan, Hans-Werner  
PATENT ASSIGNEE(S): Hoechst A.-G., Fed. Rep. Ger.  
SOURCE: Ger. Offen., 15 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2703802	A1	19780803	DE 1977-2703802	19770129
DE 2703802	B2	19781116		
DE 2703802	C3	19790712		
GB 1561874	A	19800305	GB 1978-1243	19780112
CA 1071653	A1	19800212	CA 1978-205070	19780117
US 4163760	A	19790807	US 1978-872250	19780125
NL 7800955	A	19780801	NL 1978-955	19780126
NL 177407	B	19850416		
NL 177407	C	19850916		
CH 632518	A	19821015	CH 1978-879	19780126
BE 863423	A1	19780727	BE 1978-184717	19780127
DK 7800410	A	19780730	DK 1978-410	19780127
DK 145743	B	19830214		
DK 145743	C	19830801		
FR 2378790	A1	19780825	FR 1978-2415	19780127
FR 2378790	B1	19840309		
DD 134768	C	19790321	DD 1978-203449	19780127
JP 53095920	A2	19780822	JP 1978-9216	19780130
JP 60035353	B4	19850814		
PRIORITY APPLN. INFO.:			DE 1977-2703802	A 19770129

=> S L4 AND CYCLOPENTYLPHOSPHINE  
15 CYCLOPENTYLPHOSPHINE  
L6 0 L4 AND CYCLOPENTYLPHOSPHINE

=> FILE CASREACT  
COST IN U.S. DOLLARS

SINCE FILE TOTAL  
ENTRY SESSION

FULL ESTIMATED COST	21.82	43.44
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-3.65	-3.65

FILE 'CASREACT' ENTERED AT 12:30:02 ON 30 MAY 2005  
 USE IS SUBJECT TO THE TERMS OF YOUR CUSTOMER AGREEMENT  
 COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications.

FILE CONTENT:1840 - 29 May 2005 VOL 142 ISS 22

New CAS Information Use Policies, enter HELP USAGETERMS for details.

```
*****
*
*      CASREACT now has more than 9.2 million reactions
*
*****
```

Some CASREACT records are derived from the ZIC/VINITI database (1974-1991) provided by InfoChem, INPI data prior to 1986, and Biotransformations database compiled under the direction of Professor Dr. Klaus Kieslich.

This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> S L4
L7      9 POLYISOCYANATE

=> S L7 AND L3
L8      3 CYCLOALKYLPHOSPHINE
        0 L7 AND L3

=> S L3
L9      3 CYCLOALKYLPHOSPHINE

=> S L4
L10     9 POLYISOCYANATE

=> S POLYISOCYANATE
L11     9 POLYISOCYANATE

=> S L11 AND L9
L12     0 L11 AND L9

=> D L11 1-9 ABS IBIB
```

L11 ANSWER 1 OF 9 CASREACT COPYRIGHT 2005 ACS on STN  
 AB A method for avoiding manufacturing troubles caused by the reactivity of reactive reaction products or raw material thereof in batch-mode preparation, in particular a simple and perfect method for preventing the formation of urea or urea polymers in a batch-mode preparation of isocyanates, e.g. polyisocyanates by phosgenation of polyamines, is provided. Claimed is a method for prevention of clogging of a sample introduction tube which comprises (1) washing with solvent the inner wall of the sample introduction tube used for adding a reaction product and a reactive raw



material at least after discharging the reaction product from a reaction bath and (2) applying pressure on the liquid surface inside the sample introduction tube to prevent liquid from being retained inside the sample introduction tube used for adding the reaction product and the reactive raw materials. The raw materials are polyamines, in particular compds. having amino groups on a biphenyl skeleton and the reaction products are polyisocyanates, in particular compds. having isocyanato groups on a biphenyl skeleton. Moreover, the reaction is carried out in a batch system. Thus, 4,000 L of a 11 weight% solution of triazinediamine (water content of 15-20 weight%) in chlorobenzene (MCB) was added to a 5 m2 reaction bath fitted with a sample introduction tube and a stirrer and azeotropically distilled until the water content in MCB reached  $\leq 100$  ppm, and heated to  $115^\circ$  with stirring, followed by blowing HCl(g) into the solution from a port 1 connected to the sample introduction tube to form a slurry of triazinediamine hydrochloride and then introducing MCB from a port 3 to wash the inner wall of the sample introduction tube while simultaneously introducing N from a port 2 to prevent the liquid surface from entering inside the sample introduction tube. After stopping the flow of N, phosgene was introduced at 40-50 m3/h for 8 h into the reaction mixture through the port 1, followed by removing excess phosgene by introducing N, transferring the reaction liquid to a reaction liquid receiving bath through a valve at the bottom of the reaction bath, pouring 50 L MCB at 6 m2/h for 30 s from the port 3 to wash the inner wall of the sample introduction tube, and transferring the washing liquid to the reaction liquid receiving bath which completed one batch of the reaction. After 100 batches of the reaction, the automatic valve for introducing HCl remained about 50% degree of opening and did not show any sign of clogging.

ACCESSION NUMBER: 138:204723 CASREACT  
 TITLE: Method for prevention of clogging of sample introduction tube  
 INVENTOR(S): Arata, Kimikazu; Kinpei, Koji; Deguchi, Kazuo  
 PATENT ASSIGNEE(S): Nippon Soda Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003055332	A2	20030226	JP 2001-247646	20010817
PRIORITY APPLN. INFO.:			JP 2001-247646	20010817

L11 ANSWER 2 OF 9 CASREACT COPYRIGHT 2005 ACS on STN

AB Aromatic urethanes, useful for starting materials for polymethylene polyphenyl **polyisocyanate**, are prepared by treating aromatic nitro compds. with OH-containing organic compds. and CO in the presence of platinum group catalysts and promoters comprising Lewis acids and  $<0.5$  mol (per 1 g-ion of anion of the Lewis acids) N-containing hetero aromatic compound bidentates. Thus, 1.2311 g PhNO<sub>2</sub> (I) was autoclaved with 15 mL EtOH in the presence of 2,2'-bipyridyl 0.0390, FeCl<sub>3</sub> 0.4055, and 5% Pd/C 0.1064 g under 80 kg/cm<sup>2</sup> (gage) CO atmospheric at  $160^\circ$  for 3 h to give Et phenylcarbamate in 83.3% yield and 100.0% conversion of I.

ACCESSION NUMBER: 115:158746 CASREACT  
 TITLE: Preparation of aromatic urethanes  
 INVENTOR(S): Iwata, Kazuyuki; Kurachi, Kazuhito  
 PATENT ASSIGNEE(S): Sumitomo Metal Industries, Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03074358	A2	19910328	JP 1989-211809	19890817
PRIORITY APPLN. INFO.:			JP 1989-211809	19890817

L11 ANSWER 3 OF 9 CASREACT COPYRIGHT 2005 ACS on STN

AB A method for the preparation of O-silylated aliphatic hydroxy compds. via the reaction of aliphatic hydroxy compds. with chlorotriorganosilane in the presence of phase transfer catalyst is claimed. The O-silylated hydroxy compds. were used as starting materials for the preparation of ester groups-containing isocyanates via reaction with isocyanatocarboxylic acid chlorides. Thus, Et<sub>3</sub>N+CH<sub>2</sub>PhCl--catalyzed silylation of trimethylolpropane with Me<sub>3</sub>SiCl at 54-104° gave 96% 1,1,1-tris(trimethylsiloxymethyl)propane which on treatment with 6-isocyanatohexanoyl chloride gave an ester group-containing **polyisocyanate**. The reaction was performed in one pot without isolating (Me<sub>3</sub>SiOCH<sub>2</sub>)<sub>3</sub>CET.

ACCESSION NUMBER: 115:71892 CASREACT  
TITLE: Preparation of O-silylated hydroxy compounds and their application in the preparation of ester group-containing isocyanates  
INVENTOR(S): Schmalstieg, Lutz; Pedain, Josef; Nachtkamp, Klaus  
PATENT ASSIGNEE(S): Bayer A.-G., Germany  
SOURCE: Eur. Pat. Appl., 10 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 422472	A2	19910417	EP 1990-118753	19900929
EP 422472	A3	19920102		
EP 422472	B1	19951227		
R: AT, BE, CH, DE, ES, FR, GB, IT, LI, NL, SE				
DE 3934100	A1	19910418	DE 1989-3934100	19891012
CA 2026031	AA	19910413	CA 1990-2026031	19900924
CA 2026031	C	19991116		
AT 132155	E	19960115	AT 1990-118753	19900929
ES 2083410	T3	19960416	ES 1990-118753	19900929
JP 03135986	A2	19910610	JP 1990-269656	19901009
US 5142081	A	19920825	US 1990-596173	19901010
PRIORITY APPLN. INFO.:			DE 1989-3934100	19891012
OTHER SOURCE(S):		MARPAT 115:71892		

L11 ANSWER 4 OF 9 CASREACT COPYRIGHT 2005 ACS on STN

AB The title polyisocyanates, useful in polyurethane coatings, are prepared by heating (cyclo)aliphatic diisocyanates in ≥15-fold molar excess with 3,7-diamino-2-heptanol (I) or its aqueous solns. at 100-210°. I was prepared by N-acetylation of 3,7-diamino-2-heptanone, hydrogenation over Raney Ni in H<sub>2</sub>O at 90°/40-60 bar, and acid hydrolysis. Mixing hexamethylene diisocyanate 1680, I 18.25, and H<sub>2</sub>O 2.25 g at 180°, heating at 120° until the refractive index was 1.4588, and removing excess diisocyanate by short-path distillation at 120°/0.1 mbar gave 299 g **polyisocyanate** (II) containing 24.3% NCO and 10% uretdione groups, with viscosity 980 mPa-s at 23°. An unpigmented coating containing a polyester, hydroxylated acrylic polymer, and II had pot life 3.7 h and,

X

when cured 30 min at 120°, pendulum hardness 210 s and excellent solvent resistance.

ACCESSION NUMBER: 112:58366 CASREACT  
TITLE: Preparation of polyisocyanates containing biuret and uretdione groups  
INVENTOR(S): Scholl, Hans Joachim; Pedain, Josef; Schoenfelder, Manfred  
PATENT ASSIGNEE(S): Bayer A.-G., Fed. Rep. Ger.  
SOURCE: Ger. Offen., 6 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3801934	A1	19890803	DE 1988-3801934	19880123
EP 325941	A2	19890802	EP 1989-100371	19890111
EP 325941	A3	19900704		
R: BE, DE, FR, GB, IT, NL				
JP 02003410	A2	19900109	JP 1989-11019	19890121
PRIORITY APPLN. INFO.:			DE 1988-3801934	19880123

L11 ANSWER 5 OF 9 CASREACT COPYRIGHT 2005 ACS on STN

AB A normal-phase high-performance liquid chromatog. method is described for the determination of aliphatic and aromatic **polyisocyanate** monomers or prepolymers after derivatization with 1-(2-methoxyphenyl)piperazine. The separation of 2,4- and 2,6-toluene diisocyanate, hexamethylene diisocyanate, and 4,4'-methylenediphenyl diisocyanate derivs. was performed with 5 and 10 µm cyan-amino bonded silica stationary phase under isocratic conditions and with UV detection. The same elution conditions were used for the resolution of several com. isocyanate prepolymer derivs., in reasonable anal. times. The method was also used for air anal.

ACCESSION NUMBER: 110:165276 CASREACT  
TITLE: Separation of the urea piperazine derivatives of **polyisocyanate** monomers and prepolymers by normal phase chromatography  
AUTHOR(S): Simon, P.; Moulut, O.  
CORPORATE SOURCE: INRS, Vandoeuvre, 54501, Fr.  
SOURCE: Journal of Liquid Chromatography (1988), 11(9-10), 2071-89  
CODEN: JLCHD8; ISSN: 0148-3919  
DOCUMENT TYPE: Journal  
LANGUAGE: English

L11 ANSWER 6 OF 9 CASREACT COPYRIGHT 2005 ACS on STN

AB Aromatic ketones containing reactive groups separated from the carbonyl group by a

spacer group are prepared for use as photopolymer. initiators which are covalently bonded to polymers. The Friedel-Crafts acylation of 540 g PhOCH<sub>2</sub>CH<sub>2</sub>OAc by 336 g Me<sub>2</sub>CHCOCl gave 740 g 4-(Me<sub>2</sub>CHCO)C<sub>6</sub>H<sub>4</sub>OCH<sub>2</sub>CH<sub>2</sub>OAc which was brominated (205 g) in AcOH and saponified with 32% NaOH in EtOH to give 145 g 4-(HOCH<sub>2</sub>CH<sub>2</sub>O)C<sub>6</sub>H<sub>4</sub>COCMe<sub>2</sub>OH (I). A mixture of I, an OH-containing polyacrylate (Desmophen A 365), a urethane acrylate (VPS 1748), hexanediol diacrylate, and pentaerythritol triacrylate was treated with an aliphatic **polyisocyanate**, coated (50 µm) on glass, dried, exposed to UV light to give a dry surface, and cured 1 h at 60° to give a coating with pendulum hardness 188 s.

ACCESSION NUMBER: 110:137076 CASREACT  
TITLE: Reactive photoinitiators for polymerization of

INVENTOR(S):

ethylenically unsaturated compounds  
Koehler, Manfred; Ohngemach, Joerg; Poetsch, Eike;  
Eidenschink, Rudolf; Greber, Gerhard; Dorsch, Dieter;  
Gehlhaus, Juergen; Dorfner, Konrad; Hirsch, Hans  
Ludwig

PATENT ASSIGNEE(S):

Merck Patent G.m.b.H., Fed. Rep. Ger.

SOURCE:

Eur. Pat. Appl., 22 pp.

CODEN: EPXXDW

DOCUMENT TYPE:

Patent

LANGUAGE:

German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 281941	A2	19880914	EP 1988-103267	19880303
EP 281941	A3	19900516		
EP 281941	B1	19931208		
R: AT, BE, CH, DE, ES, FR, GB, IT, LI, NL, SE				
DE 3738567	A1	19880922	DE 1987-3738567	19871113
AU 8812624	A1	19880915	AU 1988-12624	19880302
AU 608573	B2	19910411		
AT 98265	E	19931215	AT 1988-103267	19880303
ES 2060611	T3	19941201	ES 1988-103267	19880303
DD 280767	A5	19900718	DD 1988-313566	19880310
CA 1337353	A1	19951017	CA 1988-561039	19880310
DK 8801337	A	19880913	DK 1988-1337	19880311
DK 173995	B1	20020402		
FI 8801166	A	19880913	FI 1988-1166	19880311
FI 98817	B	19970515		
FI 98817	C	19970825		
BR 8801089	A	19881018	BR 1988-1089	19880311
JP 63254105	A2	19881020	JP 1988-56505	19880311
ZA 8801776	A	19881026	ZA 1988-1776	19880311
JP 10175908	A2	19980630	JP 1997-336451	19880311
US 5532112	A	19960702	US 1994-252729	19940602
US 5744512	A	19980428	US 1996-618701	19960320
US 5837746	A	19981117	US 1997-880384	19970623

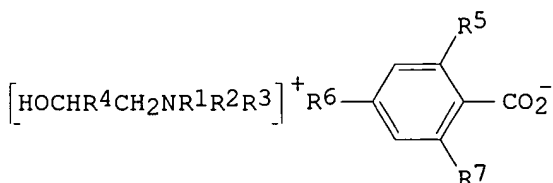
PRIORITY APPLN. INFO.:

DE 1987-3707891	19870312
DE 1987-3738567	19871113
EP 1988-103267	19880303
JP 1988-56505	19880311
US 1988-167060	19880311
US 1991-720141	19910624
US 1992-951299	19920924
US 1994-252729	19940602
US 1996-618701	19960320
US 1996-703494	19960827

OTHER SOURCE(S):

MARPAT 110:137076

L11 ANSWER 7 OF 9 CASREACT COPYRIGHT 2005 ACS on STN  
GI



AB Diisocyanates are reacted with diols in the presence of ammonium benzoates I (R1, R2, R3 = C1-20 hydrocarbyl optionally containing N, O, or S atoms and optionally with 2 of R1, R2, and R3 linked together, R4 = H or C1-20 hydrocarbyl optionally containing OH, R5, R6, R7 = H or C1-20 hydrocarbyl) or Z (CO2R1R2R3NCH2CHR4OH)2 (R1, R2, R3 = same as in I, R4 = C1-20 hydrocarbyl, Z = C1-20 hydrocarbylene) to give isocyanurate ring-containing polyisocyanates. These polyisocyanates are used with acrylic polyols to prepare rapid-drying nonyellowing polyurethane paints. Thus, 20% I (R1 = R2 = R3 = R4 = Me, R5 = R7 = H, R6 = CMe3)-butyl Cellosolve solution was added portionwise to a mixture containing 1400 g hexamethylene diisocyanate and 50 g 2,2,4-trimethyl-1,3-pentanediol at 55°, and the mixture was heated 4.5 h at 60-62° to give a **polyisocyanate** (II) with NCO content 15.0%, which when used with Acrydic A 800 (acrylic polyol, OH value 50), provided a 2-package paint, that exhibited a good balance of film mech. properties and a dust-free drying time of 65 min, compared with 120 min for a similar coating using Burnock DN950 instead of II.

ACCESSION NUMBER: 104:90643 CASREACT  
 TITLE: Isocyanurate ring-containing **polyisocyanate** and resin composition for urethane paints comprising said **polyisocyanate** and acrylic polyol  
 INVENTOR(S): Kase, Mitsuo; Okoshi, Noboru; Tsuyuzaki, Kazue  
 PATENT ASSIGNEE(S): Dainippon Ink Chemical Industry Co., Japan  
 SOURCE: Eur. Pat. Appl., 44 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 155559	A1	19850925	EP 1985-102178	19850227
R: DE, FR, GB, NL				
JP 60181114	A2	19850914	JP 1984-38356	19840229
JP 04014692	B4	19920313		
JP 60181078	A2	19850914	JP 1984-38357	19840229
JP 05051587	B4	19930803		
JP 60218357	A2	19851101	JP 1984-76321	19840416
JP 61111371	A2	19860529	JP 1984-232337	19841106
JP 06025327	B4	19940406		
US 4582888	A	19860415	US 1985-706593	19850228
PRIORITY APPLN. INFO.:				
			JP 1984-38356	19840229
			JP 1984-38357	19840229
			JP 1984-76321	19840416
			JP 1984-232337	19841106

L11 ANSWER 8 OF 9 CASREACT COPYRIGHT 2005 ACS on STN

AB Trimerization catalysts for organic diisocyanates, giving products useful for the manufacture of polyurethanes, are prepared by reaction of equimolar mixts. of

R1R2C:C(NR3R4)NR5R6 (R1, R2 = H, lower alkyl, aryl, aralkyl, cycloalkyl; R3-R6 = lower alkyl, aralkyl, cycloalkyl, or NR3R4, NR5R6 = 6- or 7-membered-ring heterocycles) and R1R2C:CR3R4 [R1 = H, lower alkyl, aryl, aralkyl, cycloalkyl; R2 = lower alkyl, aryl, aralkyl, cycloalkyl (or R1R2 = C4-5 alkylene); R3, R4 = electron-withdrawing group]. Thus, 0.0025 mol 1,1-bis(morpholino)ethylene was reacted with 0.0025 mol 4-morpholinobenzylidenemalononitrile in AcNMe2 at 20-35° to give a 22% catalyst solution, 0.5 part (solids) of which was mixed with 1 equiv 50:50 diphenylmethane 2,4'-diisocyanate-diphenylmethane 4,4'-diisocyanate mixture [isocyanate equivalent (I.E.) 125] until an exotherm to 70° receded to give a yellow liquid isocyanurate-modified **polyisocyanate**

with I.E. 160. A mixture containing a similar isocyanurate-modified **polyisocyanate** (I.E. 147) 56.65, Niax 11-27 (polyether triol) 90, Niax 34-28 (acrylonitrile-styrene copolymer polyol) 30, water 3, Niax A-1 (amine catalyst) 0.2, Bu<sub>2</sub>Sn bis(dodecyl mercaptide) 0.0025, silicone surfactant 0.1, and silicone glycol copolymer 0.02 part was stirred vigorously for 5 s and allowed to foam with rise time 84 s and time-to-firm 96 s to give a flexible sample with d. 2.54 lb/ft<sup>3</sup>, tensile strength 14 psi, tear strength 2.6 lb/in., breaking elongation 140%, and 75% compression set 20.3%.

ACCESSION NUMBER: 104:89735 CASREACT  
 TITLE: Catalyst compositions for trimerizing organic isocyanates  
 INVENTOR(S): Regelman, Dale F.  
 PATENT ASSIGNEE(S): Upjohn Co. , USA  
 SOURCE: U.S., 10 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4536490	A	19850820	US 1984-587429	19840308
US 4632989	A	19861230	US 1985-737837	19850528
US 4703099	A	19871027	US 1986-909543	19860922
US 4719245	A	19880112	US 1986-909546	19860922
PRIORITY APPLN. INFO.:			US 1984-587429	19840308
			US 1985-737837	19850528

L11 ANSWER 9 OF 9 CASREACT COPYRIGHT 2005 ACS on STN

AB Fluoroolefins F<sub>2</sub>C:CF(CF<sub>2</sub>)<sub>m</sub>(CH<sub>2</sub>)<sub>n</sub>OH (m = 0-10, n = 1-4) are prepared The olefins are useful in the preparation of copolymer for use in paints and rubber compns. curable at room temperature Thus, ClCF<sub>2</sub>CClFI [354-61-0] was treated with H<sub>2</sub>C:CH<sub>2</sub> [74-85-1] in the presence of tert-Bu peroxyisobutyrate to prepare ClCF<sub>2</sub>CClFCH<sub>2</sub>CH<sub>2</sub>I [679-69-6], and this compound was hydrolyzed to prepare ClCF<sub>2</sub>CClFCH<sub>2</sub>CH<sub>2</sub>OH [97229-40-8], which was added to water containing

Zn

to prepare F<sub>2</sub>C:CFCH<sub>2</sub>CH<sub>2</sub>OH [97168-13-3]. The same method, using F<sub>2</sub>C:CF<sub>2</sub> [116-14-3] in 1 step, was used to prepare F<sub>2</sub>C:CF<sub>2</sub>CF<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>OH [97168-16-6], which was copolymd. with F<sub>2</sub>C:CH<sub>2</sub> and F<sub>2</sub>C:CClF. The copolymer was crosslinked with hexamethylene diisocyanate trimer [28574-90-5] to prepare a transparent, glossy coating having pencil hardness 2H and good resistance to accelerated weathering.

ACCESSION NUMBER: 103:106434 CASREACT  
 TITLE: Fluorine-containing olefins  
 INVENTOR(S): Ohmori, Akira; Tomihashi, Nobuyuki; Inukai, Hiroshi; Shimizu, Yoshiki  
 PATENT ASSIGNEE(S): Daikin Kogyo Co., Ltd. , Japan  
 SOURCE: Eur. Pat. Appl., 14 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 138091	A1	19850424	EP 1984-111202	19840920
EP 138091	B1	19881117		
R: DE, FR, GB				
JP 60064940	A2	19850413	JP 1983-175122	19830921

JP 63054696 B4 19881028  
US 4564717 A 19860114 US 1984-653006 19840921  
PRIORITY APPLN. INFO.: JP 1983-175122 19830921

=> E POLYISOCYANATE

E1 1 POLYISOBUTYLBENZOPHENONE/BI  
E2 14 POLYISOBUTYLENE/BI  
E3 9 --> POLYISOCYANATE/BI  
E4 1 POLYISOCYANATED/BI  
E5 21 POLYISOCYANATES/BI  
E6 1 POLYISOCYANATOPOLYBENZYL/BI  
E7 1 POLYISOCYANIDE/BI  
E8 1 POLYISOCYANO/BI  
E9 1 POLYISOCYANOPOLYBENZYL/BI  
E10 3 POLYISOCYANURATE/BI  
E11 5 POLYISOCYANURATES/BI  
E12 4 POLYISOLEUCINE/BI

=> E CYCLOALKYLPHOSPHINE

E1 1 CYCLOALKYLPHENYLSILANOLS/BI  
E2 1 CYCLOALKYLPHENYLTELLURIUM/BI  
E3 3 --> CYCLOALKYLPHOSPHINE/BI  
E4 2 CYCLOALKYLPHOSPHINES/BI  
E5 1 CYCLOALKYLPHOSPHINIC/BI  
E6 2 CYCLOALKYLPHOSPHONATE/BI  
E7 6 CYCLOALKYLPHOSPHONATES/BI  
E8 3 CYCLOALKYLPHOSPHONIC/BI  
E9 1 CYCLOALKYLPHOSPHONIUM/BI  
E10 1 CYCLOALKYLPHOSPHORANE/BI  
E11 1 CYCLOALKYLPHTHALIMIDE/BI  
E12 1 CYCLOALKYLPIPERAZINES/BI

=> S LE

L13 44 LE

=> E POLYISOCYANATE

E1 1 POLYISOBUTYLBENZOPHENONE/BI  
E2 14 POLYISOBUTYLENE/BI  
E3 9 --> POLYISOCYANATE/BI  
E4 1 POLYISOCYANATED/BI  
E5 21 POLYISOCYANATES/BI  
E6 1 POLYISOCYANATOPOLYBENZYL/BI  
E7 1 POLYISOCYANIDE/BI  
E8 1 POLYISOCYANO/BI  
E9 1 POLYISOCYANOPOLYBENZYL/BI  
E10 3 POLYISOCYANURATE/BI  
E11 5 POLYISOCYANURATES/BI  
E12 4 POLYISOLEUCINE/BI

=> S L3

L14 3 CYCLOALKYLPHOSPHINE

=> S L13 AND L14

L15 0 L13 AND L14

=> D HIS

(FILE 'HOME' ENTERED AT 12:23:38 ON 30 MAY 2005)

FILE 'REGISTRY' ENTERED AT 12:23:49 ON 30 MAY 2005

L1 0 S CYCLOALKYLPHOSPHINE  
L2 0 S ( CYCLOALKYLPHOSPHINE OR ALKYL CYCLOALKYLPHOSPHINE OR TRICYCLO

FILE 'CAPLUS' ENTERED AT 12:27:44 ON 30 MAY 2005

L3 6 S CYCLOALKYLPHOSPHINE  
L4 18201 S POLYISOCYANATE  
L5 0 S L3 AND L4  
L6 0 S L4 AND CYCLOPENTYLPHOSPHINE

FILE 'CASREACT' ENTERED AT 12:30:02 ON 30 MAY 2005

L7 9 S L4  
L8 0 S L7 AND L3  
L9 3 S L3  
L10 9 S L4  
L11 9 S POLYISOCYANATE  
L12 0 S L11 AND L9  
E POLYISOCYANATE  
E CYCLOALKYLPHOSPHINE  
L13 44 S LE  
E POLYISOCYANATE  
L14 3 S L3  
L15 0 S L13 AND L14